

PATENT APPLICATION

AMENDMENT UNDER 37 C.F.R. §1.111
U.S. Application No. 09/072,622

over Conway (USP 5,444,476) in view of Lewen et al. (USP 5,341,374). The Examiner has rejected claims 9, 20, and 32 under 35 U.S.C. § 103(a) as being unpatentable over Conway in view of Lewen as applied to claims 1, 4, and 29 above, and further in view of Nakajima (JP401252087A). The Examiner has rejected claims 10, 21, and 33 as being unpatentable over Conway in view of Lewen as applied to claims 29, 17, and 29 above, and further in view of Roseman (EP 0 574 138). Applicants respectfully traverse these rejections, and request reconsideration and allowance of the claims in view of the following arguments.

The present invention relates to a computer based teleconferencing system that can reproduce video images at "TV quality" and which can pass those images over unshielded twisted pair wiring. "TV quality" video is defined in the specification as video signals which meet standard NTSC-quality TV performance, which is further defined to be 30 frames per second (fps) at 640 x 480 pixels per frame with the equivalent of 24 bits of color per pixel. See application, page 9, second paragraph. Applicants submit that the cited references, either alone or in combination with other art of record, do not teach or suggest these features and, therefore, the claims of the present application are patentable.

Regarding independent claims 1, 14, and 25, Conway describes a system for performing teleinteractive video teleconferencing between two or more teleconferencing sites whereby each and every user may individually and simultaneously point within any video image transmitted as part of the video teleconference (column 3, lines 46-52). Conway describes the components of the system as comprising at each site video devices such as cameras and VCRs, local monitors for displaying local and remote images, and communication sending and receiving modules. See Figure 1. Lewen

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describes a token ring local area network integrating voice, data, and image information over a single cable, where that cable may be an unshielded twisted pair (UTP) (col. 6, lines 22-34).

In the Office Action, the Examiner asserts that Conway transmits video signals between teleconferencing sites and Lewen transmits signals, including imaging signals over a network having unshielded twisted pair wiring. However, neither Conway nor Lewen specifies or suggests that the video signals or images represent "TV quality" images.

A key issue in this application is the meaning of the term "TV quality". It appears to Applicants that the Examiner is taking the position that, if signals are provided on a television display, as Conway discloses, the signals inherently must be "TV quality". Applicants submit that, even taking into account the fair teachings of the prior art, such a conclusion must be based only on hindsight, which is an impermissible basis for a prior art rejection.

TV displays can display images in a range of qualities, from still images to full motion, NTSC-quality video. Some of these image qualities constitute "TV quality" as defined in the present application; some do not. In the context of the claimed videoconferencing invention, it is important to look at how conventional videoconferencing systems worked. In those systems, prior to the present invention, videoconferencing displays were jerky and inconsistent at best.

Given the poor quality of those conventional videoconferencing displays as viewed on monitors, one must ask: Why does Conway, or any of the prior art, alone or in combination, suggest "TV quality" images, just because of the mention of a television monitor? This is the crux of the hindsight problem, particularly in light of how "TV quality" is defined in the present application.

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In the present application, the "TV quality" video signals are described as standard NTSC-quality TV performance. This standard provides live, full motion video of conference participants. Conway discloses the use of video imaging devices (col. 5, lines 56-68, col. 6, lines 1-26), but does not enable or disclose the quality of the video image, and more specifically, does not enable or disclose that the video image is "TV quality", as defined in the present application. Conway limits the video signal to "one of acceptable quality" (col. 5, line 42-43) but fails to further define the signals. For example, Conway may use video images that are only half frame or display images at a rate less than 30 frames per second. "Acceptable quality" in prior art videoconferencing systems meant jerky images. It did not mean "TV quality" as used in the present application, and in the claims.

Further, Lewen states that an "imaging system 59" (col. 6, line 52) may be connected to a network having unshielded twisted pair wiring by using an adapter card 70, but does not teach or suggest the size (as measured by pixel count) or quality of the resulting image. An imaging system does not define or suggest a "TV quality" video system. For example, an imaging system may be simply a facsimile machine or it may be just a camera having only the capability to capture still images in a digital format. As a whole, Lewen is directed toward a communication system which can integrate voice and data in a single system while providing distributed control. See column 2, lines 20-24. Without more, Lewen does not disclose transmission of full motion video over a communications system. Thus the Conway-Lewen combination discloses the transmission of video images of some undefined quality using unshielded twisted pair wiring, but fails to disclose the transmission of "TV quality" images.

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Applicants further assert that the use of a "TV monitor" in Conway 26 and 26' (col. 6, line 13) does not indicate video signals of NTSC-quality. It is well known by skilled artisans that signals of various quality may be displayed using "TV monitors." Examples of monitors displaying less than NTSC-quality images are remote security system monitors having a frame rate of 15 fps or less, monitors used on digital cameras having an image size less than 640 x 480 pixels, and monochrome monitors. Such monitors are often used in IP or POTS (plain old telephone service) based low quality video conferencing systems having either low resolution or low frame rates. For the Examiner to infer that the use of a "TV monitor" by Conway discloses an NTSC-quality video signal is improper hindsight reconstruction. Clearly a "TV monitor" may display images of less than NTSC-quality, and it is not proper to infer the quality of the signal solely from the use of a monitor.

Although the Examiner has combined Conway and Lewen, Applicant asserts that no suggestion exists to combine these references. Conway introduces a data network in Fig. 7 only to control remote cameras, not to transmit data which may be displayed with video signals. Further, Conway is directed to a system having teleinteractive video teleconference sites (col. 5, lines 24-25), inferring specifically constructed facilities interconnected by communication interfaces 28, rather than a data network. Lewen describes a system having a plurality of voice terminals interconnected in a data network (col. 3, lines 48-49), implying individual users. Each of Conway and Lewen is directed to completely different applications, and no motivation to combine the references is present.

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For the reasons stated above, Applicants submit that the independent claims 1, 14, and 25 are patentable. Thus, claims 2-8, 11-13, 14-19, 22-24, 26-28, 29-31, and 34-36 which depend from patentable independent claims 1, 14, and 25 are therefore patentable for at least the same reasons.

Regarding claims 9, 20, and 32, Nakajima describes a teleconferencing system which has the capacity to display both the local and the remote side images on a single monitor, and further describes a teleconferencing system wherein the video signal from each side has the images from two separate cameras. Thus at both the local and the remote site, each of two monitors displays an image which is a combined view of a local and a remote camera. Nothing in Nakajima teaches nor suggests the quality of the video image. Nakajima clearly does not disclose this feature and the Conway-Lewen-Nakajima combination does not anticipate nor render obvious the claimed invention as recited in claims 9, 20, and 32. Consequently, Applicants submit that claims 9, 20, and 32 are patentable over Conway in view of Lewen and Nakajima for at least this additional reason as well.

Regarding claims 10, 21, and 33, Roseman is not prior art to the present application. Roseman was published December 15, 1993, whereas the present application claims benefit of an application filed October 1, 1993. Consequently, Applicants submit that claims 10, 21, and 33 are patentable.

Pursuant to the foregoing discussion, Applicants submit that claims 1-36 in the subject application are patentable.

The Examiner's rejections having been overcome, Applicants submit that the subject application is in condition for allowance. The Examiner is respectfully requested to contact the

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undersigned at the telephone number listed below to discuss other changes deemed necessary. Applicants hereby petition for any extension of time which may be required to maintain the pendency of this case, and any required fee for such extension is to be charged to Deposit Account No. 19-4880.

Respectfully submitted,



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PATENT TRADEMARK OFFICE

Date: February 20, 2001

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I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to:

Assistant Commissioner for Patents
Washington, D.C. 20231

Date: February 20, 2001

Signed:


Thea K. Wagner



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APPENDIX

VERSION WITH MARKINGS TO SHOW CHANGES MADE

Technology Center 2600

IN THE SPECIFICATION:

The specification is changed as follows:

Page 1, first full paragraph:

This application is a continuation of U.S. application 08/660,805 filed June 7, 1996, now
USP 5,758,079, which is a continuation of Application No. 08/131,523, filed October 1, 1993, now
USP 5,689,641.